



## **Mattawoman Watershed Society**

*Protecting and preserving Mattawoman Creek for the enjoyment of all.*

November 8, 2010

Submitted electronically via

<http://www.regulations.gov/search/Regs/home.html#submitComment?R=0900006480b54c95>

The Honorable Lisa P. Jackson  
Administrator  
U. S. Environmental Protection Agency  
Water Docket, Mailcode: 28221T  
1200 Pennsylvania Ave., NW  
Washington, DC 20460

Re: Chesapeake Bay TMDL -- Docket no. EPA-R03-OW-2010-0736

Dear Administrator Jackson:

The Mattawoman Watershed Society (MWS) would like to thank you for this opportunity to comment on the Draft Chesapeake Bay Total Maximum Daily Load (Bay TMDL).

The MWS is an all-volunteer 501(c)3 nonprofit organization dedicated to protecting and preserving Mattawoman Creek through research, education, and advocacy. We regularly communicate with about one thousand supporters, including many who directly use or otherwise enjoy Mattawoman Creek or the natural aspects of its watershed.

Mattawoman Creek is an eight-digit watershed covering approximately 94 square miles in Maryland's inner coastal plain. It comprises about twenty miles of fluvial river feeding a sinuous seven-mile long tidal-freshwater estuary opening onto the Potomac River at Indian Head.

The MWS has a particular interest in the Bay TMDL because Mattawoman Creek has had an approved TMDL since 2005, with little evidence that the presently constituted "reasonable assurance" for meeting the TMDL will *ever* realize the required 40% reduction in nutrient loads from the 2000 baseline levels. For example, the Mattawoman Creek Watershed Management Plan, authored by the Army Corps of Engineers, foresees a 50% *increase* in nutrients in the future [ACOE, 2003]. Even Charles County's draft Water Resources Element [WRE, 2010], which we believe employs unrealistically optimistic assumptions, fails to achieve the required reduction by 2030, five years *beyond* the goal for full compliance with the Bay TMDL.

Because the current and historical approaches to cleaning up the Bay have failed to achieve pollution reduction goals *we strongly support the establishment of the Bay TMDL*. Furthermore, *because enforcement of TMDLs already in place is demonstrably weak, we also*

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*strongly endorse the new regulatory approach to enforcing TMDLs as an important means to reduce nutrient and sediment pollution to the Chesapeake Bay and its tributaries.*

### **Mattawoman Creek as a test case for assessing TMDL enforcement**

As has often been noted, the Bay TMDL represents the largest and most complex attempt ever to implement the TMDL tool. This necessarily requires operating at a relatively coarse-grained spatial scale for the foreseeable future. Under such circumstances, an understanding the effectiveness of various enforcement strategies may be accelerated by examining these strategies at a smaller spatial scale, where more detailed modeling is feasible, and where a simpler matrix of land uses and pollution sources tests strategies with greater specificity. We believe that Mattawoman provides a compelling test case at a manageable spatial scale for examining the effectiveness of new approaches to enforcement, especially in regard to nonpoint sources, urban stormwater, and forest conservation, for the following reasons:

(i) Mattawoman represents a highly visible and charismatic Bay resource because of its outstanding qualities. For example, it has for many years been an anadromous-fish spawning and nursery ground among the best, if not the best, in the Bay with a healthy and robust trophic structure in its freshwater-tidal fish community [Carmichael, 1992; Uphoff, 2005]. It also supports a vibrant recreational largemouth bass fishery [Groves, 2005; Penrod, 2010] that generates tens of millions of commerce annually [Fedler, 1989]. Over 100 bass tournaments are launched from its shores annually. Its intact forests harbor Important Bird Areas [Audubon, 2009], riparian biodiversity [DNR, 2005], and hotspots of avian and herpetological biodiversity [FWS, 2006].

(ii) Because agriculture is a less important contributor to pollution loads, the watershed epitomizes the issues of forest retention and urbanization, and provides an ideal test case for examining these issues. The Bay watershed loses to development about 100 acres of forest per day [CBP, 2010], and pollution from urbanization is increasing [CBP, 2007]. In the same vein, Mattawoman's majority-forested watershed is targeted for development by Charles County policies promoting urbanization of an area larger than Washington D.C., with 10,000 acres of forest-loss projected by 2030 [ACOE, 2003].

(iii) A GIS-supported model based on the Hydrologic Simulation Program Fortran code already exists for Mattawoman and may serve as a foundation for testing enforcement scenarios. The Army Corps of Engineers developed the model to study the impacts of projected urbanization [ACOE, 2003]. The model relies on unusually detailed calibration data from continuous monitoring stations operated by the Smithsonian Environmental Research Center [SERC, 2000].

It should be of concern to those structuring the Bay TMDL that a disturbingly large discrepancy exists between the Army Corps' modeling (a 50% *increase* in nutrients) and that conducted by Charles County for the state-mandated Water Resource Element (WRE) to its Comprehensive Plan (a 20%-25% *decrease*) [WRE, 2010]. The WRE incorporated land-use loads from the Chesapeake Bay Program (CBP) Phase 4.3 model, the predecessor to the current Phase 5 model. Because loadings in the two phases are

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comparable (notwithstanding the greater number of land-use categories in Phase 5) it is natural to ask if a calibrated Mattawoman-scale model would sharpen the accuracy of, or identify deficiencies in, the model being used for the Bay TMDL.

(iv) Mattawoman is covered by Prince George's and Charles Counties' Phase-I MS4 permits (Municipal Separate Storm Sewer System), providing EPA with one of its key enforcement backstops. In addition, there is little headroom for nutrient reduction through improvements to wastewater treatment plants. Hence Mattawoman tests the ability to attain reductions through, for example, stronger requirements in, *and enforcement of*, county MS4 permits.

(v) Success in protecting as valued a resource as Mattawoman would bolster confidence in the commitment to restore the Bay using the Bay TMDL strategy. On the other hand, permitting its degradation—*as is currently happening*—undermines confidence in broader bay-wide efforts: a recent report finds a steep decline in fish abundance and species richness in the tidal estuary, and correlates the decline to watershed urbanization [Uphoff, 2009]. Consistent with these problems, usage of non-tidal waters by spawning anadromous fish was found also to have plummeted in the last decade. Are the strategies in the Bay TMDL able to reverse this trend?

(vi) Mattawoman enjoys broad support from resource agencies [Carmichael, 1992; ACOE, 2003; Groves, 2005; Uphoff, 2005; Uphoff, 2009; FWS, 2006; FWS, 2009].

It also receives wide public support [SGA, 2007; Sierra, 2007; Sierra, 2010; American Rivers, 2009; Audubon, 2009; SGACC, 2009; MBFN, 2010].

(vii) A past reluctance on the part of local county government to fully embrace Bay initiatives in general, and Mattawoman in particular, may be changing as Mattawoman concerns became a political issue in the recent Charles County election cycle; 80% of the board of commissioners have changed. Hence, here is place to demonstrate an ability to overcome past land-used decisions detrimental to water quality, a necessary ingredient of any strategy to restore the Bay in the face of increasing pollution from urbanization.

(viii) As documented below using Mattawoman as an example, the past approach of restoring the Bay by delegating authority to states and waiting does not work. Even now, it is disturbing that Maryland's draft Watershed Implementation Plan (WIP) fails to provide sufficient internal assessments of the effectiveness of its program, and fails to supply sufficient information to judge the strength of its enforcement program<sup>1</sup> Even so, Maryland's WIP is among the better ones, and Mattawoman would provide an ideal place to test state resolve in a state with perhaps the strongest institutional heritage for Bay-restoration.

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<sup>1</sup> See appended comments to the Maryland Department of the Environment (MDE) on its draft WIP.

**The need for a strong Bay TMDL with federal enforcement backstops is supported by Mattawoman's degradation in the face of continual warnings.**

Mattawoman's recent decline [Uphoff, 2009] occurs in the face of a long history of alarms about the vulnerability of its remarkable assets to urbanization, not unlike the warnings and failed actions for the Bay at large. Hence it provides a lens that underscores the present inadequacy of state and federal enforcement of the Clean Water Act (CWA), and focuses the urgent need for a transition from voluntary to regulatory enforcement.

Among the warnings are:

- In 1990, Mattawoman's vulnerability to the growth inducing impacts of the new Mattawoman Wastewater Treatment Plant (WWTP) was expressed in a Memorandum of Understanding (MOU) between the funding participants, *i.e.*, the EPA, MDE, and Charles County [MOU, 1990]. The MOU purported to alleviate secondary impacts. It is a great irony of the CWA that it is partly responsible for the WWTP, which enabled the development that has brought Mattawoman to its present precarious state.
- In 1992, a DNR fishery study concluded that Mattawoman represented "as near to ideal conditions as can be found in the northern Chesapeake Bay," and warned that it "should be protected from overdevelopment" [Carmichael, 1992].
- In 1996, the Maryland Department of Natural Resources (DNR) commenting on Charles County's Comprehensive Plan, noted that "[p]rotection of this watershed appears to be in direct conflict with the location and size of the development district" [DNR, 1996]. (The development district is an area 30% larger than Washington DC that blankets much of the Mattawoman watershed, and that was enabled by the EPA and MDE funded WWTP.) Yet resource protection within the development district (*e.g.* stream buffer width) is less than other areas in the county.
- In 1996, Mattawoman was designated as impaired on the 303(d) list in 1996 for excess nitrogen, phosphorus, and sediment. (It has since been removed for sediment.) [MDE,2005]
- In 1997, DNR wrote a report specifically outlining the vulnerability to development of Mattawoman and DNR lands within the watershed [DNR, 1997].
- In 1998, in the state-federal Clean Water Action Plan, Mattawoman was among only 17 of the 138 eight-digit watersheds in Maryland singled out as being *both* of very high quality and of very high vulnerability. Mattawoman's vulnerability stemmed from urbanization. The Clean Water Action Plan warned (emphasis added): "*The State considers that these watersheds deserve special attention in order to address degradation that already is experienced in some areas before the pristine resources in the watershed are lost.*"

- In 2002, Mattawoman was again designated as impaired on the 303(d) list, now for impacts to the biological integrity of its benthic and fish communities in the nontidal river. [MDE, 2005]
- In 2003, the Army Corps authored the Mattawoman Creek Watershed Management Plan, and warned of the projected growth: *“These intense development practices would have severe repercussions on the biological community and would decrease the habitat quality within the estuary”* (emphasis added). The basis of this and other warnings in the plan was an extensive analysis of current land-use conditions and the impacts of projected growth determined from well-calibrated hydrological modeling as described above [ACOE, 2003].
- In 2005, EPA approved a TMDL for nitrogen and phosphorus.
- Also in 2005, concerns for the impacts of increasing impervious surface on Mattawoman’s vaunted fisheries were highlighted in separate DNR reports. [Groves, 2005; Uphoff, 2005].
- In 2009, DNR reported a serious decline in fish-species richness and in the populations of remaining species in the freshwater-tidal estuary, and linked the declines to watershed urbanization [Uphoff, 2009]. Thus the consequences warned of above are now evidently coming true at a rapid pace.

By detailing how continued warnings about an especially noteworthy eight-digit watershed are now coming true, the above list amply demonstrates the ineffectiveness of past strategies to protect the Bay at large against increasing urbanization. In spite of MS4 permits dating back to 1997, and purported “reasonable assurances” in a TMDL, Mattawoman’s biological resources are waning. Given such data, we believe the justification for stronger EPA measures is self evident. In particular, the need for effective EPA backstops is critical.

As an example, consider Charles County’s MS4 permit. In 2002, a condition of the permit required the county to retrofit 10% of its untreated impervious surface during each 5-year permit cycle. As explained in the appended comments to MDE, it appears that the county is falling seriously behind this requirement, with no incentive administered by the state to improve.

Similarly, in its annual MS4 reports, Charles County publicizes its Mattawoman Creek Watershed Management Plan [ACOE, 2003], when in fact it is not making progress on the most important recommendation in the plan, namely the protection of the Mattawoman stream valley (including tributaries). The plan is intimately connected to MS4, as it was undertaken as a condition of the county’s first MS4 permit. In the plan, the Army Corps states unequivocally that “[p]rotection of the stream valley represents the single most important action that can be taken to protect the natural resources of the Mattawoman Creek.” (Note that this conclusion was made in the absence of any freedom to adjust land-use scenarios, such as reconsidering the concept of a development district.) The county has had

since 2005 the LIDAR-based stream valley delineation but in five years has failed to draft a protective ordinance.

In spite of these MS4 failures and the absence of any measures to begin meaningfully enforcing Mattawoman's TMDL, all while the Creek is exhibiting signs of decline [ACOE, 2003; TMDL, 2005; Uphoff, 2009], we note that MDE issued in 2009 permits for an airport extension that would bury ~800 feet of a Mattawoman tributary, channeling it in box culvert. This tributary drains to anadromous fish spawning reaches of the creek. Of the airport extension, the National Marine Fisheries Service (NMFS) stated "the runway realignment will have devastating impacts on the subject watershed" and concluded "we have significant concerns regarding the potential impacts on downstream resources and spawning habitat" [NMFS, 2001]. NMFS also emphasized the growth inducing impacts of a new reliever airport, stating "we are also concerned about cumulative impacts this proposal will have on wetlands and instream habitat throughout the local region." Similarly strong statements were made by the Army Corps, the National Park Service, and DNR. Unfortunately, EPA did not comment. Clearly a stronger federal oversight of *all* permits based on the Clean Water Act is called for if Bay restoration is to be successful.

Past history such as outlined here overwhelmingly justifies stronger federal enforcement of the Clean Water Act, which clearly confers the needed authority to regulate for clean water. Without stronger actions, such as much needed "backstop" enforcement of MS4 permits, Bay resources such as Mattawoman Creek, and by logical extension the Bay itself, will continue to experience chemical, physical, and biological degradation. The end result will be an impoverished environment for residents of the Bay watershed in the form of fewer recreational opportunities, lost ecological services, costly restoration measures, and the absence of sustainable economies based on the Bay's natural resources.

Sincerely,

Jim Long  
President  
On behalf of the Mattawoman Watershed Society.

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Hilary Falk, for Choose Clean Water



## References

- ACOE, 2003. *Mattawoman Creek Watershed Management Plan*, U.S. Army Corps of Engineers, Baltimore District (2003).
- American Rivers, 2009. American Rivers designated Mattawoman as America's fourth most endangered river in April, 2009.
- Audubon, 2009. Mattawoman forests designated an Important Bird Area. See: <http://mddc.audubon.org/events/1944> ; [http://mddc.audubon.org/files/Audubon%20Maryland-DC/documents/IBA\\_Update\\_Spring2010\\_FINAL\\_0.pdf](http://mddc.audubon.org/files/Audubon%20Maryland-DC/documents/IBA_Update_Spring2010_FINAL_0.pdf) (Links valid Nov. 2, 2010).
- Carmichael, 1992. *Fish Sampling in Eight Chesapeake Bay Tributaries*, Carmichael, J. et al. Maryland DNR, Chesapeake Bay Research and Monitoring Div., Report CBRM-HI-92-2.
- CBP, 2007. *Chesapeake Bay 2006 Health & Restoration Assessment, Part Two: Restoration Efforts* Chesapeake Bay Program, 2007, Report identifiers CBP/TRS 284/07; EPA 093R-07002. ([www.chesapeakebay.net/assess](http://www.chesapeakebay.net/assess)).
- CBP, 2010. [www.chesapeakebay.net/status\\_watershedforests.aspx?menuitem=26067](http://www.chesapeakebay.net/status_watershedforests.aspx?menuitem=26067) (Last modified: 03/04/2010).
- DNR, 1996. Letter to William G. Carroll, Maryland Office of Planning, from Theresa Pierno, Maryland Department of Natural Resources, dated December 9, 1996, and contained in the Public Comments on the Draft Charles County Comprehensive Plan Update, dated March 4, 1997.
- DNR, 1997. *Population Growth in the Mattawoman Watershed*, Strategic Trends Analysis Team, Maryland Department of Natural Resources (1997).
- DNR, 1998. *Clean Water Action Plan* (1998). [www.dnr.state.md.us/cwap/EXECSUM.htm](http://www.dnr.state.md.us/cwap/EXECSUM.htm)
- DNR, 2005. *Maryland Biological Stream Survey 2000-2004, Vol IX, Aquatic Biodiversity*, Maryland Dept. of Natural Resources, Report CBWP-MANTA-EA-05-6, July 2005. p. 9-30 reports that a Mattawoman riparian site exhibits the greatest herpetological species richness in of all MBSS sites in Maryland.
- EPA, 1990. *Memorandum of understanding among Charles County, Maryland, the State of Maryland, and the United States Environmental Protection Agency, Region III*, signed by William Wisniewski (EPA), J.L. Hearn (MDE), and Thomas Mac Middleton (Charles Co.); 1990.
- Fedler, Anthony, 1989. *An examination of Maryland angler characteristics, behaviors, and economic values*, Univ. of Maryland. Correcting for inflation, prorating for the Potomac's relative bass population, and accounting for growth in the fishery, a value of over \$60 million to Maryland can be derived for the Potomac's Largemouth Bass fishery.
- FWS, 2006. *Gap Analysis of Animal Species Distributions in Maryland, Delaware, and New Jersey*. R.C. McCorkle, J.N. Gorham, and D.A. Rasberry. 2006. Final Report – Part 2. U.S. Fish & Wildlife Service, Delaware Bay Estuary Project, and USGS Biological Resources Division, Gap Analysis Program.
- FWS, 2009. Letter to Colonel David Anderson, Army Corps of Engineers, from Leopoldo Miranda, recommending denial of permits for Charles County's proposed extension of its Cross County Connector across the Mattawoman watershed. December 23, 2009.
- Groves, 2005. *Largemouth Bass and the Charles County Connection*, Mary Groves, Maryland DNR, Inland Fisheries, Annapolis, Maryland, Poster presentation at the Maryland 2<sup>nd</sup> Streams Symposium 10-13 August, 2005.

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MDE, 2005. *Total Maximum Daily Loads of Nitrogen and Phosphorus for Mattawoman Creek in Charles County and Prince George's County, Maryland*, Maryland Department of the Environment submitted to EPA Region III Jan. 21, 2004; Document version Jan. 15, 2005.

MBFN, 2010. Maryland Bass Federation Nation. See for example <http://www.mdbass.com/post/38>.

MOU, 1990. *Memorandum of understanding among Charles County, Maryland, the State of Maryland, and the United States Environmental Protection Agency, Region III*, signed by William Wisniewski (EPA), J.L. Hearn (MDE), and Thomas Mac Middleton (Charles Co.); 1990.

NMFS, 2001. Memo from John Nichols, National Marine Fisheries Service, to Rich Bulavinetz, Corps of Engineers, Baltimore District, concerning "Maryland Airport Proposed Runway Realignment & Upgrade," dated October 12, 2001.

Penrod, 2010. Ken Penrod: "Mattawoman Creek is the most productive tributary of all the fine Potomac River branches." [www.penrodsguides.com/articles/mattawomancreek.htm](http://www.penrodsguides.com/articles/mattawomancreek.htm) (link operates November 2, 2010). Mattawoman is also singled out as unique in *Fishing the Tidal Potomac River*, 1988 and *Ken Penrod's Tidal Potomac River Fishing Bible*, 1992, both published by PPC Publishing, Beltsville, MD.

SGACC, 2009. *Trouble Ahead—Use Alternate Routes*, a report critiquing present growth policies in Charles County and outlining a Smarter Growth alternative, by the Smarter Growth Alliance for Charles County, a consortium of 22 local, state, and regional NGOs (2009).

Sierra, 2007. *Americas Wild Legacy*, Sierra Club, San Francisco, enumerating 52 places across the nation deserving protection, including Mattawoman.

Sierra, 2010. Mattawoman is the focus of a Sierra Club, Maryland Chapter conservation campaign. See <http://maryland.sierraclub.org/>

SGA, 2007. *Regional Conservation Priorities 2007—A Call to Action*, Smart Growth Alliance, Bethesda, MD.

WRE, 2010. Charles County draft Water Resources Element, July 2010. Available on web as of November 7, 2010 at [www.charlescounty.org/webdocs/pgm/publications/resourceinfrastructure/Draft\\_wre.pdf](http://www.charlescounty.org/webdocs/pgm/publications/resourceinfrastructure/Draft_wre.pdf)

Uphoff, 2005. *What could happen to tidal fish habitat and fisheries in Mattawoman? Lessons learned in Severn River and other developed Bay tributaries*, Powerpoint presentation to Charles County Commissioners, J. Uphoff, June 20, 2005.

Uphoff, 2009. *2009 Fisheries and Habitat Interactions Project: Development of Habitat-based Reference Points for Chesapeake Bay Fishes of Special Concern: Impervious Surface as a Test Case*, J. Uphoff, M. McGinty, R. Lukacovic, J. Mowrer, B. Pyle, and M. Topolski., Federal aid report to the U.S. Fish and Wildlife Service by the Maryland Department of Natural Resources, Fisheries Service, DNR report F-61-R-5.





## **Mattawoman Watershed Society**

*Protecting and preserving Mattawoman Creek for the enjoyment of all.*

TMDL Coordinator

Maryland Department of the Environment  
1800 Washington Boulevard  
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November 8, 2010

via email: [tmdlcoordinator@mde.state.md.us](mailto:tmdlcoordinator@mde.state.md.us)

Re: Maryland's draft Phase I Watershed Implementation Plan

Dear TMDL Coordinator:

The Mattawoman Watershed Society (MWS) would like to thank you for this opportunity to comment on Maryland's Watershed Implementation Plan (WIP), the roadmap for complying with the Chesapeake Bay Total Maximum Daily Load (Bay TMDL).

The MWS is an all-volunteer 501(c)3 nonprofit organization dedicated to protecting and preserving Mattawoman Creek through research, education, and advocacy. We regularly communicate with about one thousand supporters, including many who directly use or otherwise enjoy Mattawoman Creek or the natural aspects of its watershed.

Because the current and historical approaches to cleaning up the Bay have failed to achieve pollution reduction goals we strongly support the establishment of the Bay TMDL. Furthermore, because enforcement of TMDLs already in place is demonstrably weak, we also strongly endorse the new regulatory approach to enforcing TMDLs as an important means to reduce nutrient and sediment pollution to the Chesapeake Bay and its tributaries.

We are appreciative of Maryland's leadership in committing to achieve pollution reduction goals by 2020, five years earlier than the Bay TMDL requires. We also note positively that Maryland's draft WIP is stronger than most other states. However, the draft WIP, while citing a significant number of potentially valuable measures, appears to lack sufficient specificity to gauge whether the TMDL goals will be met. We believe that Mattawoman Creek and its watershed provide an ideal case for testing the more detailed implementation measures that are needed to strengthen Maryland's WIP, because Mattawoman already has an approved TMDL for nitrogen and phosphorus that is not being adequately enforced, and because specific issues affecting it are also of importance to the Bay at large, as enumerated below.

The MWS has a keen interest in the Bay TMDL, and the WIP, because Mattawoman Creek has had an approved TMDL since 2005 [MDE, 2005], with little evidence that the presently constituted "reasonable assurance" for meeting the TMDL will *ever* realize the required 40% reduction in nutrient loads from the 2000 baseline levels. For example, the Mattawoman Creek Watershed Management Plan, authored by the Army Corps of Engineers, foresees a 50% *increase* in nutrients in the future [ACOE, 2003]. Even Charles County's draft Water Resources Element [WRE, 2010], which we believe employs unrealistically optimistic

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assumptions, fails to achieve the required reduction by 2030, five years *beyond* the goal for full compliance with the Bay TMDL, and ten years beyond Maryland's goal of 2020.

Mattawoman also makes a compelling and urgent test case because its high fisheries values are now demonstrably declining, according to the Department of Natural Resources (DNR). As you are probably aware, Mattawoman for many years has stood out as a remarkable Bay resource: it harbors the finest anadromous-fish nursery known among Maryland's Bay tributaries [Carmichael, 1992; Uphoff, 2005], it has long been the epicenter of a nationally recognized largemouth bass fishery [Fewless, 1996; Groves, 2005; Penrod, 2010] that generates tens of millions in Maryland commerce annually [Fedler, 1989], and it exhibits hotspots of herpetological and avian biodiversity [Audubon, 2009; FWS, 2009]. However, DNR has recently reported a serious decline in fish abundance and species richness in its tidal freshwater estuary [Uphoff, 2009]. In addition, Mattawoman's list of 303(d) impairments was increased in 2002 for impacts to benthic and fish communities in the non-tidal river and tributaries [MDE, 2005].

**We recommend that the following specific issues be reinforced in the WIP. We note where appropriate how employing Mattawoman as an example sharpens the need for resolve, specificity, and commitment.**

- **Details must be supplied for how the options will be achieved by 2017 for retrofitting 30%, 40%, or 50% of untreated impervious surface** in municipalities with a Phase I permit for a Municipal Separate Storm Sewer System (MS4) [WIP, 2010]. For example, Charles County, which is responsible for  $\frac{3}{4}$  of Mattawoman's watershed, was required by its 2002 MS4 permit (a Phase I permit) to retrofit 10% of its untreated impervious surface every 5-year permit cycle. This pace is far below that necessary to achieve a 30% retrofit by 2017. Even so, Charles County is far behind schedule. While available figures appear inconsistent, please note that either 2607 acres or 765 acres are untreated, depending on the source.<sup>1</sup> At the rate of 10% retrofit every five years, and allowing for a seven year period from the 2002 permit to the start of 2010, one would expect either ~365 acres or ~110 acres to have been treated, depending on which figure is used for the untreated impervious surface. In contrast, only 45 acres were treated as of July 2010 [WRE, 2010; MS4, 2010] *far below the permit requirement*. Thus it appears that enforcement strategies are inadequate.

Yet the strategies given in the WIP for ensuring compliance of impervious surface retrofits [WIP, 2010; p. 5-23] appear to be identical to the present inadequate strategies for enforcing compliance with existing MS4 permits. Therefore, much more detail describing enforcement steps is needed to assure that the past practice of overlooking deficient MS4 performance will be rectified.

- **Provide detail for how forest preservation goals will be attained.** The WIP discusses an element to "[s]trengthen Maryland's Forest Conservation Act by requiring State and local programs be amended to require a 'no net loss of forest.'" We strongly endorse a

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<sup>1</sup> According to Charles County's 2010 MS4 annual report, 2607 acres of impervious surface in the "development" district are untreated (p. 55). The figure is 765 acres, according to the draft Water Resources Element, which has not yet been submitted to the state in final form (Section 3.a).

strategy of retaining forest land, because forest contributes minimally to, and even reduces, nutrient and sediment loads, while paying dividends many times over by moderating stormwater discharge rates and amounts, enhancing stream baseflow, cooling stream water, providing habitat, increasing property values, and providing an aesthetic landscape. In addition, a forested landscape is a critical element for mitigating against the impacts of climate change [Palmer, 2007].

The forest preservation goal could be strengthened considerably by adding an element that identifies "intact forests" for protection. Protecting intact forest is much more effective and efficient than the present WIP proposal of planting trees for no net loss of forest because tree planting is most likely to target open-space lands that contribute less loading than the development replacing the original forest.

Furthermore, the WIP contains no quantitative analysis of how realistic is a goal of no net forest loss through mitigation. For example, the Army Corps projects that Mattawoman would lose 10,000 acres of forest in the next twenty years [ACOE, 2003]. The impacts of this cannot be mitigated, nor realistically “planted away.” In addition, identifying 10,000 acres for mitigating tree-planting appears to be a major challenge. Without additional detail, this challenge calls into question the prognosis of this worthy WIP strategy.

- **Outline stronger standards for Smart Growth and limiting sprawl development as a means to improve water quality, that includes a re-evaluation of Priority Funding Areas.** The “intact forest” element above dovetails with this idea. The governor’s fully funding Program Open Space is another consistent and welcome strategy, as noted in the draft WIP, and can be means of protecting intact forest.

The WIP relies in part on the concept Priority Funding Areas (PFAs) and Comprehensive Plans as a component of Smart Growth. However, as the case of Mattawoman illustrates, these approaches require substantial strengthening if they are to be effective. For example, Charles County’s Comprehensive Plan establishes a “development district” that is 30% larger than Washington D.C. As noted by DNR, “[p]rotection of this watershed appears to be in direct conflict with the location and size of the development district” [DNR, 1996]. We also note that such a large area, overlapping much of the watershed of one the Bay’s most productive tributaries, is antithetical to Smart Growth.

An important specific means to strengthen the Smart Growth component would be to re-evaluate PFAs with respect their impacts to water quality. In fact, “[t]he statutory criteria for drawing PFAs are based on existing densities, infrastructure capacities, and municipal boundaries, *not on careful plans that consider where future growth should occur.* [Lewis, 2009; emphasis added]. Many PFAs were designated in haste and with minimal, or no, public input [Lewis, 2009]. In the case of Bryans Road, a one-stoplight town that drains to sensitive spawning reaches of Mattawoman and its tributaries, no public input was solicited before its designation as a PFA, but the public process required for subarea plans later revealed intense public opposition to the PFA designation.

Bryans Road is a PFA that appears to be extremely poorly cited for protecting the aquatic quality of Mattawoman Creek. Included within the PFA boundary are *three* noteworthy Mattawoman tributaries: (i) the heavily forested headwaters of one of Mattawoman's outstanding anadromous-fish spawning-tributaries [Powell, 2005]; (ii) the headwaters of another tributary that drains to head of tide [Powell, 2005]; and (iii) a *globally rare* Magnolia Bog wetland in the headwaters of yet a third tributary [NatureServe, 2010]. Bryans Road is also adjacent to Chapman State Park, is within a Maryland Stronghold Watershed [DNR, 2008] and is surrounded by forested land that drains to especially sensitive spawning waters of Mattawoman Creek that include the state's most biodiverse herpetological site [DNR, 2005].

Listing Bryans Road as a PFA has impacts beyond the degradation of its local rich natural resources. Its listing was part of a strategy to cement Charles County's extremely large development district and to serve as a pretext for new highways that would open large areas to sprawl development (the proposed Cross County Connector and Western Waldorf Bypass). The Bryans Road PFA effectively replaces the Chapman's Landing development proposal that was circumvented in 1998 when the state and the Conservation Fund purchased what is now Chapman State Park. Note that the state's original Smart Growth initiative was motivated in no small part by the Chapman's Landing proposal, a disturbing irony given the evolution of plans for Bryans Road just one mile north. Hence, the example of Bryans Road shows how a re-evaluation of PFAs could limit sprawl development and support Smart Growth alternatives, such as investing in Waldorf, while enhancing the goals of the WIP.

It might be expected that the new WRE requirements for county Comprehensive Plans could be a tool to effect Smart Growth solutions to water pollution. The WRE is intended to link land use decisions to attaining TMDL reduction, for example, and is mentioned favorably in the draft WIP. However, for this to be the case, stronger state oversight is clearly needed: as the Charles County draft WRE shows, none of the three scenarios considered in the WRE comes close to meeting Mattawoman's TMDL out to 2030, as noted above.

In summary, as the above examples attest, Maryland's draft Phase I WIP, while representing a reasonable start and obvious effort, could easily break down if not substantially reinforced with more specificity for implementation. We have chosen three specific examples discussed in the WIP, namely retrofitting untreated impervious surface, forest preservation, and Smart Growth as a tool (in principle, a Maryland strength), to illustrate how the present assurances in the WIP need to be vastly improved to be convincing and successful.

Respectfully submitted,

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And appended to comments submitted online to the EPA on the Bay-wide TMDL.

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## References

ACOE, 2003. *Mattawoman Creek Watershed Management Plan*, U.S. Army Corps of Engineers, Baltimore District (2003).

Audubon, 2009. Mattawoman forests designated an Important Bird Area. See: <http://mddc.audubon.org/events/1944> ; [http://mddc.audubon.org/files/Audubon%20Maryland-DC/documents/IBA\\_Update\\_Spring2010\\_FINAL\\_0.pdf](http://mddc.audubon.org/files/Audubon%20Maryland-DC/documents/IBA_Update_Spring2010_FINAL_0.pdf) (Links valid Nov. 2, 2010).

Carmichael, 1992. *Fish Sampling in Eight Chesapeake Bay Tributaries*, Carmichael, J. *et al.* Maryland DNR, Chesapeake Bay Research and Monitoring Div., Report CBRM-HI-92-2.

DNR, 1996. Letter to William G. Carroll, Maryland Office of Planning, from Theresa Pierno, Maryland Department of Natural Resources, dated December 9, 1996, and contained in the Public Comments on the Draft Charles County Comprehensive Plan Update, dated March 4, 1997.

DNR, 2005. *Maryland Biological Stream Survey 2000-2004, Vol IX, Aquatic Biodiversity*, Maryland Dept. of Natural Resources, Report CBWP-MANTA-EA-05-6, July 2005. p. 9-30 reports that a Mattawoman riparian site exhibits the greatest herpetological species richness in of all MBSS sites in Maryland.

DNR, 2008. *Stream Ecology Fact Sheet*, map on second page shows Stronghold Watersheds in Maryland. <http://dnr.maryland.gov/streams/pubs/StrongholdFactSheet.pdf>

Fedler, Anthony, 1989. *An examination of Maryland angler characteristics, behaviors, and economic values*, Univ. of Maryland. Correcting for inflation, prorating for the Potomac's relative bass population, and accounting for growth in the fishery, a value of over \$60 million to Maryland can be derived for the Potomac's Largemouth Bass fishery.

Fewless, Leon, 1996. *Statewide Fisheries Survey and Management Study V: Investigations of largemouth bass populations inhabiting Maryland's tidal waters*. Maryland DNR, Freshwater Fisheries Division, Report F-48-R.

FWS, 2006. *Gap Analysis of Animal Species Distributions in Maryland, Delaware, and New Jersey*. R.C. McCorkle, J.N. Gorham, and D.A. Rasberry. 2006. Final Report – Part 2. U.S. Fish & Wildlife Service, Delaware Bay Estuary Project, and USGS Biological Resources Division, Gap Analysis Program.

Groves, 2005. *Largemouth Bass and the Charles County Connection*, Mary Groves, Maryland DNR, Inland Fisheries, Annapolis, Maryland, Poster presentation at the Maryland 2<sup>nd</sup> Streams Symposium 10-13 August, 2005.

Lewis, 2009. Lewis, 2009. Lewis, R., Knaap, G-J., and Sohn, J., *Growth With Priority Funding Areas: A Good Idea Whose Time Has Yet to Come*, J. Am. Planning Assoc., **75**, 457 (2009).

MDE, 2005. *Total Maximum Daily Loads of Nitrogen and Phosphorus for Mattawoman Creek in Charles County and Prince George's County, Maryland*, Maryland Department of the Environment submitted to EPA Region III Jan. 21, 2004; Document version Jan. 15, 2005.

MS4, 2010. NPDES Annual Report, July 2009 - June 2010. Charles County Government Department of Planning and Growth Management. Municipal Separate Storm Sewer Discharge Permit 02-DP-3322 (MD0068365).

NatureServe, 2010. Fall-line Terrace Gravel Magnolia Bog: *Nyssa sylvatica* - *Magnolia virginiana* - (*Pinus rigida*) / *Rhododendron viscosum* - *Toxicodendron vernix* / *Smilax pseudochina* Woodland; Blackgum - Sweetbay - (Pitch Pine) / Swamp Azalea - Poison-sumac / Bamboovine Woodland, G1. [www.natureserve.org](http://www.natureserve.org); website information verified November 7, 2010.

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Palmer, 2007. *Stream Temperature Surges Under Urbanization And Climate Change: Data, Models, And Responses*, K.C. Nelson and M.A. Palmer, J. Am. Water Res. Assoc. **43**, 440 (2007).

Penrod, 2010. Ken Penrod: "Mattawoman Creek is the most productive tributary of all the fine Potomac River branches." [www.penrodsguides.com/articles/mattawomancreek.htm](http://www.penrodsguides.com/articles/mattawomancreek.htm) (link verified November 2, 2010).

Mattawoman is also singled out as unique in Fishing the Tidal Potomac River, 1988 and Ken Penrod's Tidal Potomac River Fishing Bible, 1992, both published by PPC Publishing, Beltsville, MD.

Powell, 2005. *A Tale of Two Streams*, S.S. Powell, G.B. Wilmot, J.P. Long. Poster presentation at the Maryland 2<sup>nd</sup> Streams Symposium 10-13 August, 2005. A summary of the poster is available at [www.mattawomanwatershed.org](http://www.mattawomanwatershed.org) / Tale of Two Streams.

Uphoff, 2005. *What could happen to tidal fish habitat and fisheries in Mattawoman? Lessons learned in Severn River and other developed Bay tributaries*, Powerpoint presentation to Charles County Commissioners, J. Uphoff, June 20, 2005.

Uphoff, 2009. *2009 Fisheries and Habitat Interactions Project: Development of Habitat-based Reference Points for Chesapeake Bay Fishes of Special Concern: Impervious Surface as a Test Case*, J. Uphoff, M. McGinty, R. Lukacovic, J. Mowrer, B. Pyle, and M. Topolski., Federal aid report to the U.S. Fish and Wildlife Service by the Maryland Department of Natural Resources, Fisheries Service, DNR report F-61-R-5.

WIP, 2010. Maryland's Phase I Watershed Implementation Plan For the Chesapeake Bay; Total Maximum Daily Load, September 1, 2010.

WRE, 2010. Charles County draft Water Resources Element, July 2010. Available on web as of November 7, 2010 at [www.charlescounty.org/webdocs/pgm/publications/resourceinfrastructure/Draft\\_wre.pdf](http://www.charlescounty.org/webdocs/pgm/publications/resourceinfrastructure/Draft_wre.pdf)